

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-16. (canceled)

17. (Previously presented) A chrome-free passivating solution, characterized in that said chrome-free passivating solution comprises the following components:

effective amount of oxysalt containing transition metal,
inorganic acids; and
water;

wherein said oxysalt containing transition metal is selected from a group consisting of oxysalt containing titanium, oxysalt containing zirconium, oxysalt containing hafnium, oxysalt containing vanadium, oxysalt containing niobium, oxysalt containing tantalum, oxysalt containing molybdenum, oxysalt containing tungsten, oxysalt containing manganese, oxysalt containing technetium, and oxysalt containing rhenium, and

the weight ratio between said oxysalt containing transition metal and inorganic acids is in the range of 200~400:1.

18. (Previously presented) The chrome-free passivating solution as claimed in claim 17, characterized in that said chrome-free passivating solution further comprises a complexing agent.

19. (Previously presented) The chrome-free passivating solution as claimed in claim 17, characterized in that said oxysalt containing transition metal is at least one or two selected from a group consisting of oxysalt containing titanium, oxysalt containing manganese, oxysalt containing molybdenum, oxysalt containing zirconium and oxysalt containing vanadium.

20. (Previously presented) The chrome-free passivating solution as claimed in claim 19, characterized in that said oxysalt containing transition metal is a mixture of ammonium

molybdate, potassium permanganate, and a weight ratio between ammonium molybdate and potassium permanganate is in the range of 35.about.45:1 or 1:35.about.45.

21. (Previously presented) The chrome-free passivating solution as claimed in claim 17, characterized in that the inorganic acid is one or more selected from sulfuric acid, nitric acid, and hydrochloric acid.

22. (Previously presented) The chrome-free passivating solution as claimed in claim 21, characterized in that the inorganic acids are two selected from a group consisting of sulfuric acid, nitric acid, and hydrochloric acid, and the weight ratio between sulfuric acid and nitric acid or hydrochloric acid, is 7.about.10:1 or 1:7.about.10.

23. (Previously presented) The chrome-free passivating solution as claimed in claim 17, characterized in that the pH value of said chrome-free passivating solution is 1.about.3.

24. (Previously presented) The chrome-free passivating solution as claimed in claim 17, characterized in that said chrome-free passivating solution further comprises one or more kinds of silicates.

25. (Previously presented) The chrome-free passivating solution as claimed in claim 24, characterized in that said silicate is sodium silicate, potassium silicate or ammonium silicate.

26. (Previously presented) The chrome-free passivating solution as claimed in claim 24, characterized in that the weight ratio between the oxysalt containing transition metal and the silicates is 35.about.45:1.

27. (Previously presented) The chrome-free passivating solution as claimed in claim 18, characterized in that the complexing agent is organic acid or peroxide.

28. (Previously presented) The chrome-free passivating solution as claimed in claim 18, characterized in that said organic acid is one or more selected from a group consisting of citric acid, tartaric acid, pyrophosphate acid, nitrilotriacetic acid, ethylene diamine tetramethyl phosphoric acid (EPTMP), sulfonamic acid, carboxyl acetic acid, ethylene diamine tetraacetic

acid(EDTA), hydroxy-ethylidene diphosphonate (HEDP), 2-hydroxy phosphonoacetic acid, 1-hydroxy-2-naphthoic acid, diethylidene-triamine pentamethylene phosphonic(DTPMP), 1-hydroxy-2-(3-pyridyl) ethane-1,1-diphosphonic, hydroxyl-propylidene-1,1-diphosphonic(HPDP), 2-hydroxy phosphonoacetic acid (HPAA), 1-hydroxy butylidene-1,1-diphosphonic acid (HBDP), 1-hydroxy-ethylidene-1,1-diphosphonic acid (HDEP), 1-hydroxy-hydroxy-diphosphonic acid.

29. (Previously presented) The chrome-free passivating solution as claimed in claim 28, characterized in that the complexing agent is a mixture of citric acid, tartaric acid, pyrophosphate acid, and the weight ratio of citric acid: tartaric acid: pyrophosphate acid, is 6:5:1.

30. (Previously presented) The chrome-free passivating solution as claimed in claim 28, characterized in that the complexing agent is a mixture of pyrophosphate acid, nitrilotriacetic acid and sodium peroxide, and the weight ratio of pyrophosphate acid:nitrilotriacetic acid:sodium peroxide is 6:5:1.

31. (Previously presented) The chrome-free passivating solution as claimed in claim 17, characterized in that each liter of passivating solution contains the following components:

oxysalts containing transition metal	20.~.35 g
complexing agent	18.~.38 g
inorganic acid	0.05.~.0.15 g
water	remains.

32. (Previously presented) The chrome-free passivating solution as claimed in claim 31, characterized in that oxysalts containing transition metal are replaced with a mixture of said salt and silicate.